UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/640,626	08/12/2003	Arra E. Avakian	10017135-1	1128

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EXAMINER
PANTOLIANO JR, RICHARD

ART UNIT	PAPER NUMBER
2194	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)
	10/640,626	AVAKIAN ET AL.
	Examiner	Art Unit	
	Richard Pantoliano Jr	2194	

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _27 July 2007_.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _2,4-9,11-16 and 18-22_ is/are pending in the application.

   4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _2, 4-9, 11-16, and 18-22_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

   Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

   Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   a)☐ All b)☐ Some * c)☐ None of:

   1.☐ Certified copies of the priority documents have been received.

   2.☐ Certified copies of the priority documents have been received in Application No. _____.

   3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

   * See the attached detailed Office action for a list of the certified copies not received.

WILLIAM THOMSON
SUPERVISORY PATENT EXAMINER

Attachment(s)

1)☒ Notice of References Cited (PTO-892)
2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3)☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5)☐ Notice of Informal Patent Application
6)☐ Other: _____.

DETAILED ACTION

Response to Amendment

1.   This Office Action is filed in response to amendments filed on **27 July 2007** in

regard to Application# **10/640,626. Claims 2, 4-9, 11-16, and 18-22** are currently

pending and have been considered below.

Claim Rejections - 35 USC § 103

2.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

3.   **Claims 2, 4-9, 11-16, and 18-22** are rejected under 35 U.S.C. 103(a) as being

unpatentable over <u>Angel et al</u> (US Pat: 6,314,558), hereinafter <u>Angel</u>, in view of <u>Abrams</u>

<u>et al</u> (M. Abrams, et al. World Wide Web: Beyond The Basics. Prentice Hall, 1998),

hereafter <u>Abrams</u>.

4.   As to **Claim 2,** <u>Angel</u> discloses the invention substantially as claimed including a

method for execution by at least one processor, the method comprising:

        a) selecting at least one method of a class for instrumentation (Col. 22, lines 15-

25 and Col. 20, lines 24-34);

        b) inserting instrumentation code in a byte code representation of the selected at

least one method without modifying a source code of the selected at least one method

by generating a wrapper method that contains the instrumentation code, wherein the

instrumentation code comprises byte codes (Col. 20, lines 14-23; Col. 22, line 26 – Col

23, lines 30; and Col 26, lines 14-31) (A byte code for a wrapper is generated and the

calling method is instrumented to access the wrapper, thereby meeting the claim

limitation);

       c) executing the byte codes during execution of the at least one method (col. 21,

lines 25-64); and

       d) generating a call, by the executed byte codes, to an interface wherein the call

comprises information regarding the instrumented at least one method (Col. 19, line 58

– Col. 20, line 13).

5.   Angel does not explicitly teach wherein the generating of a wrapper contains a

call to the byte code representation of the at least one method. Angel teaches only that

wrappers are generated for native method calls (Col. 26, lines 14-31).

6.   Abrams teaches wherein Java is used to implement an operating system (OS),

thereby making all native code accessible to applications implemented as byte code

within the Java OS (pg. 3, para. 2-6 and Figure 2).

7.   It would have been obvious to one of ordinary skill in the art at the time of

invention would have modified the teachings of Angel with the teachings of Abrams.

One would have been motivated by the fact that using an operating system written

entirely in Java would eliminate the overhead of the host operating system, thereby

allowing for an accurate measure of the performance of the instrumented byte code

application (Angel; Col. 16, lines 37-56 and Abrams; pg. 4, "Advantages of JavaOS"

section).

8.   As to **Claim 4**, Angel further teaches generating a wrapper method comprises:

        a) renaming the at least one method from an original name to a new name (Col.

26, lines 14-31);

        b) creating a wrapper method with the original name (Col. 3, lines 48-59 and Col.

26, lines 14-31) (Byte code with the name of the native version of the method is created

and instrumented to allow access to the native method, thereby meeting this claim

limitation);

        c) inserting byte codes into the wrapper method that when executed generate

the call to the interface (Col. 26, lines 14-31) (Byte code with the name of the native

version of the method is created and instrumented to allow access to the native method,

thereby meeting this claim limitation); and

        d) inserting byte codes into the wrapper method that when executed call the

renamed at least one method (Col. 26, lines 14-31).

9.   As to **Claim 5**, Angel further teaches wherein generating a wrapper method

further comprises setting a flag of the renamed at least one method to private (Col. 26,

lines 14-31) (The step of "adding the name as a private native method" meets this claim

limitation).

10.   As to **Claim 6**, <u>Angel</u> further teaches wherein the selecting at least one method

comprises selecting at least one method of a class for instrumentation when the class is

being loaded by a java virtual machine (JVM) for execution by the JVM (Col. 19, lines

38-57 and Col. 20, lines 24-34).

11.   As to **Claim 7**, <u>Angel</u> further teaches wherein the selecting at least one method

comprises selecting at least one method of a class for instrumentation prior to execution

of the class by a java virtual machine (JVM) (Col. 19, lines 38-57; Col. 20, lines 24-34

and Col. 21, line 65 – Col. 22, line 14).

12.   As to **Claim 8**, <u>Angel</u> further teaches wherein further comprising monitoring the at

least one method using the information regarding the instrumented at least one method

(Col. 21, lines 7-19; Col 23, lines 56-59 and Col. 24, lines 12-16).

13.   As to **Claims 9, 11-15**, these claims are directed to the system implementing the

methods of **Claims 2, 4-8** respectively, and are therefore rejected for the same

reasoning as **Claims 2, 4-8** as specified above.

14.   As to **Claims 16, 18-22**, these claims are directed to the system implementing

the methods of **Claims 2, 4-8** respectively, and are therefore rejected for the same

reasoning as **Claims 2, 4-8** as specified above.

Response to Arguments

15.   Applicant's arguments filed **27 July 2007** have been fully considered but they are not persuasive.

16.   In regard to **Claim 2**, Applicants present the following arguments:

a) Applicant alleges that <u>Abrams</u> does not teach "...generating a wrapper method that contains the instrumentation code..."; and

b) Applicant alleges that there is no support for the motivation provided by Examiner for modifying the teachings of <u>Angel</u> with the teachings of <u>Abrams</u>.

17.   As to **(a)**, Examiner respectfully disagrees. First, nowhere in the context of **Claim 2** or any of the dependent claims does Applicant claim the use of native applications. Second, Examiner used the term "native application" with respect to how <u>Angel</u> appears to use the term. <u>Angel</u> does not limit the term in the same manner as <u>Abrams</u>. As such, Examiner gave the term "native application" as described by <u>Angel</u> its broadest reasonable interpretation. That is, Examiner interpreted "native application" to be any application that it implemented to operate natively on the particular *operating system* on which it executes. As cited previously, <u>Abrams</u> discloses that, other than the portions that must interact directly with the hardware, the JavaOS is an operating system whose native method of operating and interacting with applications is through Java applications, which are comprised of byte code. Since the limitation being argued requires only that the generated wrapper point to byte code representation of a method be called, the limitation is met by the cited art.

18.   As to **(b)**, Examiner respectfully disagrees. <u>Abrams</u> explicitly states that:

"JavaOS achieves the goal of eliminating the overhead of host operating

system. Because JavaOS contains no extraneous features found in other

operating systems, it allows smaller and simpler devices to be built that

execute Java programs more efficiently than other systems."

Therefore, by eliminating the overhead of a host operating system, an accurate

measure of the executing application would be made possible by the modification of the

teachings of Angel with the teachings of Abrams, thereby providing sufficient motivation.

19.   For the reasoning cited above, Examiner maintains the rejection of **Claim 2**.

Since all other claims were argued for the same reasons as applied to **Claim 2,**

Examiner maintains the rejection of all other pending claims.

Conclusion

20.   **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time

policy as set forth in 37 CFR 1.136(a).

21.   A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later

than SIX MONTHS from the mailing date of this final action.

22.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Richard Pantoliano Jr whose telephone number is (571)

270-1049. The examiner can normally be reached on Monday-Thursday, 8am - 4 pm

EST.

23.   If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, William Thomson can be reached on (571)272-3718. The fax phone

number for the organization where this application or proceeding is assigned is 571-

273-8300.

24.   Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

RP
08/15/2007

WILLIAM THOMSON
ERVISORY P. __NT EXAMINER